

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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REC'D 09 NOV 1999

WIPO PCT

Applicant's or agent's file reference XY SONIC PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US99/03638	International filing date (day/month/year) 19 FEBRUARY 1999	Priority date (day/month/year) 20 FEBRUARY 1998
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant XY, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 2 sheets.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 06 JULY 1999	Date of completion of this report 19 AUGUST 1999
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  MAUREEN WALLENHORST
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/03638

I. Basis of the report

1. This report has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):*

- ☒ the international application as originally filed.
- ☒ the description, pages 1-13 , as originally filed.
pages NONE , filed with the demand.
pages NONE , filed with the letter of _____.
pages _____ , filed with the letter of _____.
- ☒ the claims, Nos. 1-109 , as originally filed.
Nos. NONE , as amended under Article 19.
Nos. NONE , filed with the demand.
Nos. NONE , filed with the letter of _____.
Nos. _____ , filed with the letter of _____.
- ☒ the drawings, sheets/fig 1/8-8/8 , as originally filed.
sheets/fig NONE , filed with the demand.
sheets/fig NONE , filed with the letter of _____.
sheets/fig _____ , filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE .
- ☒ the claims, Nos. NONE .
- ☒ the drawings, sheets/fig NONE .

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. STATEMENT**

Novelty (N)	Claims <u>1-109</u>	YES
	Claims <u>none</u>	NO
Inventive Step (IS)	Claims <u>1-109</u>	YES
	Claims <u>none</u>	NO
Industrial Applicability (IA)	Claims <u>1-109</u>	YES
	Claims <u>none</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-109 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the use of a portable oscillating device for coupling mechanical oscillations to the exterior surface of a flow cytometer nozzle in order to clean the nozzle and prevent clogging of the nozzle, a flow cytometer system having an oscillation system responsive to both a first and second driver system having different oscillation parameters in order to create mechanical oscillations coupled to the exterior surface of a flow cytometer nozzle, and an oscillation system for a flow cytometer having an oscillation variation system which operates throughout a range of oscillation parameters to clean and remove adherents from both the interior and exterior of the flow cytometer nozzle.

----- NEW CITATIONS -----
NONE

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 30, 57-61 and 95-104 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because the claims are indefinite for the following reason(s): Claims 30 and 57 are indefinite since they depend from themselves. Claims 30, 95, 96, 99 and 100 are indefinite since these claims are improper multiply dependent. Since claims 30, 95, 96, 99 and 100 are multiply dependent claims, they should not serve as the basis for any other multiply dependent claim. See PCT Rule 6.4(a).

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(6): GO1N 15/14 and US Cl.: 436/63, 164; 422/82.01, 82.05; 356/72, 73; 250/461.2; 209/3.1, 3.2, 4, 571, 576-579, 127.4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/03638

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : GO1N 15/14

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 436/63, 164; 422/82.01, 82.05; 356/72, 73; 250/461.2; 209/3.1, 3.2, 4, 571, 576-579, 127.4

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, STN/CA, Biosis, Medline, WPIDS

search terms: flow cytometry, oscillate, transducer, clean, wash, unclog, nozzle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,643,796 A (VAN DEN ENGH et al.) 01 July 1997, column 3, lines 60-68 and column 4, lines 1-25.	1-109
A	US 5,602,039 A (VAN DEN ENGH) 11 February 1997, column 3, lines 42-68, column 4, lines 1-11 and column 6, lines 8-27.	1-109
A	US 5,641,457 A (VARDANEGA et al.) 24 June 1997, column 8, lines 43-61.	1-109
A	US 4,673,288 A (THOMAS et al.) 16 June 1987, column 12, lines 13-18 and column 16, lines 28-42.	1-109
A	US 4,790,653 A (NORTH, JR.) 13 December 1988, column 7, lines 45-62.	1-109



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date.	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

04 MAY 1999

Date of mailing of the international search report

19 MAY 1999

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US99/03638

A. CLASSIFICATION OF SUBJECT MATTER:

US CL :

436/63, 164; 422/82.01, 82.05; 356/72, 73; 250/461.2; 209/3.1, 3.2, 4, 571, 576-579, 127.4